PenARC NIHR Bid Summary

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PenARC's Approach and Ways of Working

PenARC (the NIHR Applied Research Collaboration South West Peninsula) is a partnership of all the organisations providing health and social care across the region, local authorities, some key charities, Health Innovation Southwest and the universities of Exeter and Plymouth.

We aim to be a catalyst for positive change in health and care - co-producing research that improves lives, reduces inequalities, and strengthens systems. We focus on the priorities of people who use, deliver and plan services, aiming to have impact both in our region and across the country.

Our approach is defined by:

- Collaboration: Long-term partnerships between service users, communities, practitioners, policymakers and researchers.
- Inclusion: Involving those most affected by the burdens of ill-health in every stage of research.
- Knowledge mobilisation: Embedding implementation and impact from the start of every project.
- Capacity building: Developing skills and leadership across health, care and community sectors.
- Responsiveness: Aligning with national priorities while remaining flexible to local needs.

Through our seven themes (outlined below), we integrate work on prevention, inclusion and implementation to address regional and national priorities in health and care.

Key Thematic Areas

We aim to respond to the health and social care systems' priorities, but a substantial part of our work relates to "theme" areas. These themes don't operate as silos but are areas where we have particular expertise. Projects frequently involve more than one theme, and all are supported by staff from our "Core" and "Methods" themes.

PenARC Thematic Areas

1. Core

Driving strategy, inclusion, and impact

2. Dementia & Neurological conditions

Improving lives through personalised care

3. Ageing Well

Supporting independence in later life

4. Children & Young People's Health

Better outcomes from birth onwards

5. Methods for Research & Implementation

Rigorous, inclusive, and actionable research

6. Mental Health

Equity and access for all minds

7. Prevention

Healthier lives, earlier interventions

1. Core Theme

PenARC's Core Theme provides cross-cutting leadership for Public and Patient Involvement and Engagement (PPIE), Equality, Diversity and Inclusion (EDI), Knowledge Mobilisation, and Research Capacity Development. A cross-institutional Operations Directorate supports governance, finance, communications, and coordination.

Key functions include:

- Strategic oversight from senior leaders with expertise in patient and public involvement, applied research, implementation science, psychosocial health, and research inclusion.

- Expert support for PPIE, EDI, and knowledge mobilisation.

- A research capacity programme offering fellowships, PhDs, secondments, and mentoring.

The Core aims to ensure PenARC is inclusive, responsive, and embedded in the health and care ecosystem, and contributes to developing future applied health research leaders.

More details on the Core Theme.

2. Dementia and Neurological conditions

Theme Lead: Professor Linda Clare
Co-Theme Lead: Dr Nicolas Farina

This theme aims to improve quality of life and care for people with dementia and neuroprogressive conditions, with a strong focus on equity and real-world implementation.

Priorities include co-produced psychosocial interventions, assistive technology, inclusive care pathways, and support for people living alone or with complex needs.

It tackles service gaps, diagnostic inequalities and carer burden. Research is grounded in public involvement and behavioural insights.

Partnerships span NHS Trusts, private providers, national charities (e.g. Alzheimer's Society), and NIHR centres.

Leadership is supported by senior researchers and a PhD programme, with national-level influence through NIHR collaborations.

The theme delivers scalable innovations tailored to underserved populations.

More details on the Dementia and Neurodegeneration Theme.

3. Ageing Well

Theme Lead: Professor Victoria Goodwin
Co-Theme Lead: Dr Abi Hall

This theme addresses the health and wellbeing of older adults, particularly those with multiple long-term conditions or frailty, with a focus on rural and coastal communities.

Research priorities include reducing falls and disability, digital innovation for home care, AI-driven identification of risk, and functional and nutritional support in care homes.

The theme integrates health economic evaluation and systems thinking to design scalable interventions. Co-production with older people and frontline professionals ensures relevance and inclusion.

Partnerships include ICBs, social care providers, NIHR infrastructure, and academic collaborators.

The team includes experts in data science, rehabilitation, and nutrition, and supports regional capacity through studentships and fellowships.

More details on the Ageing Well Theme.

4. Children and Young People's Health

Theme Lead: Professor Vashti Berry
Co-Theme Lead: Dr Gretchen Bjornstad

This theme takes a life-course approach to improving children and young people's health, addressing social, geographical, and service-based inequalities.

Key areas include neonatal and perinatal care, emotional development, mental health, complex needs, and social prescribing. Innovations like the NOAH toolkit, SOSA, and INTEGRATED parenting support are co-produced and poised for wider implementation.

The team works across sectors - health, education, and social care - and with a range of local and national partners, including Devon County Council, NIHR programmes, and VCSEs.

Underserved groups, including those in poverty, rural areas, or with disabilities, are at the centre of all research.

 A strong research workforce is supported through fellowships and national collaborations.

More details on the Children and Young People's Health Theme.

5. Methods for Research and Implementation

Theme Lead: Professor Jo Thompson-Coon
Co-Theme Lead: Dr Annie Hawton

This cross-cutting theme ensures the methodological quality, equity, and translational value of all ARC research.

It brings expertise in health economics, statistics, AI, data science, qualitative research, and implementation science. The team supports study design, evaluation, and evidence synthesis, and helps embed research in real-world decision-making.

Strategic areas include co-produced methodologies, real-world data analytics, economic evaluation, and knowledge mobilisation.

The theme builds system-wide capacity through training (e.g. HSMA), secondments, and PhD studentships. It also contributes to national policy through partnerships with DHSC and NHS England, and drives innovation through interdisciplinary research.

More details on the Methods for Research and Implementation Theme.

6. Mental Health

Theme Lead: Professor Heather O'Mahen
Co-Theme Lead: Dr Rebecca Hardwick

This theme responds to high national need for improved mental health (MH) care, particularly in underserved rural and coastal communities. It aims to increase access, integrate mental and physical care, and support community-based, needs-led approaches.

Key areas include digital MH tools, realist evaluations of service delivery, and research into maternal mental health, neurodiversity, and mood disorders.

Co-produced with people with lived experience, the research addresses system gaps and structural inequalities.

The theme works with ICBs, VCSEs, NHS partners, and national NIHR infrastructure to support evidence-based transformation.

Ongoing work influences national policy and enhances MH research inclusion and impact.

More details on the Mental Health Theme.

7. Prevention

Theme Lead: Professor G.J. Melendez-Torres
Co-Theme Lead: Professor Kerryn Husk

This cross-cutting theme focuses on shifting healthcare upstream by addressing the social, behavioural, and environmental drivers of health.

Priorities include poverty and inequality, school- and policing-based prevention, social prescribing, violence prevention, and management of cardio-metabolic conditions.

Research is co-designed with communities, targeting disadvantaged populations using an equity-first approach (e.g. CORE20PLUS5). It applies real-world data (e.g. One Devon), and works with HDRCs, SPHR, local authorities, and VCSEs to embed prevention into policy and practice.

Using the Push-Pull-Pick model, the theme identifies interventions that are both impactful and scalable, aiming for long-term health system change.

More details on the Prevention Theme.

Research Capacity Building

We will create change through opportunities for underserved professions and service areas to learn and grow as researchers. We aim to empower people to use, generate, and implement evidence effectively. Key initiatives are:

- Eight PhD opportunities;

- Fellowship schemes;

- Research internship programmes;

- The Health Services Modelling Associates programme;

- Seminars and training opportunities on inclusion, co-production, evidence use and knowledge mobilisation.

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Prevention

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Further Theme Details

Core Theme

PenARC's Core Theme provides strategic and operational leadership across the Collaboration, integrating work on equality, inclusion, public involvement, knowledge mobilisation, and research capacity development. Its purpose is to ensure that all PenARC activities are collaborative, inclusive, and embedded in the health and care system, while enabling others to conduct impactful applied research.

The Core team brings together senior academic and operational leadership from the Universities of Exeter and Plymouth, including expertise in co-production, implementation science, research inclusion, and applied health systems research. Joint roles with the NIHR Biomedical Research Centre strengthen alignment across NIHR infrastructure, particularly in equality, diversity, and research capacity building.

Key functions include supporting project prioritisation, partnership coordination, and communication; providing expert input on public and community involvement and knowledge mobilisation; and leading a structured programme of research capacity development through PhDs, fellowships, internships, and secondments, with a focus on underserved professions and communities.

PenARC's approach emphasises embedding implementation from the outset of projects, developing evidence for practice through co-production, and ensuring that diverse perspectives shape the research agenda. Core staff also drive national collaboration with other ARCs and NIHR centres to share learning on effective inclusion, PPIE, and workforce development.

By combining strategic oversight with practical support, the Core ensures PenARC's research is responsive to system needs and that its infrastructure builds long-term regional and national research capability.

Dementia and Neurological conditions

PenARC's Dementia and Neurological conditions theme focuses on enhancing service provision, equity of care and quality of life from diagnosis through to end of life. Our work addresses regional challenges, such as below-average diagnosis rates, rural deprivation, and inconsistent post-diagnostic support, while generating learning relevant to national transformation priorities.

We aim to co-produce evidence-based initiatives, interventions and resources that can be widely implemented. Key areas of research include personalised, goal-oriented rehabilitation; digital and assistive technologies that enhance independence; and psychosocial and behavioural approaches that support wellbeing, reduce carer burden,

and improve inclusion. Current projects address post-diagnostic support, person-centred residential care, and inequalities in diagnosis and access.

We draw on deep methodological and clinical expertise spanning psychology, old age psychiatry, behavioural science, and implementation. The team includes leaders from the NIHR Policy Research Unit in Dementia and Neurodegeneration (DeNPRU Exeter), the NIHR HealthTech Research Centre in Brain Health, and the SPIN Dementia Network+, enabling strong policy influence and national reach.

Cross-ARC and national collaborations – for example with ARCs Wessex, Yorkshire & Humber, and Kent, Surrey and Sussex, and with partners such as Alzheimer's Society, ICSs, and the Health Innovation Network – will support scalability and system impact.

Ageing Well

PenARC's Ageing Well theme focuses on improving health, function, and quality of life for older people - particularly those with multiple long-term conditions or frailty – including across rural and coastal communities. The theme addresses the growing complexity of ageing populations by developing, evaluating, and implementing interventions that promote independence, reduce disability, and improve quality of care, particularly in community, primary, and social care settings.

The team brings together leading clinical and methodological expertise in rehabilitation, frailty and multiple long-term conditions. This includes work on models of care, technology-enabled rehabilitation and the use of routine data to target need and optimise care. The theme also benefits from strong cross-ARC and infrastructure partnerships, including with the Exeter BRC and HRC, the NIHR SPCR, and regional ICBs and local authorities through the Peninsula Research and Innovation Partnership (PRIP).

PenARC's approach is explicitly inclusive, and implementation focused. Co-production with older people, carers and family members and practitioners ensures interventions are contextually relevant and scalable. Public involvement is led by specialists in research inclusion, embedding NIHR INCLUDE principles and recommendations for including older people in research throughout.

Ongoing and planned work includes exercise for falls prevention amongst underserved communities and digital "living lab" collaborations with care providers. Collectively, the theme aims to develop and deliver practical, evidence-based solutions for ageing populations across the country, and share learning with other ARCs working with those living with frailty and multiple long-term conditions, as well as promoting healthy ageing.

Children and Young People's Health

PenARC's Children and Young People (CYP) theme focuses on improving health, wellbeing, and equity for children and young people, particularly those living with complex needs, disability, or social disadvantage. Our work follows a life-course approach, addressing the social, economic, and environmental conditions that shape health from infancy onward.

The theme targets key regional and national priorities across our largely rural and coastal areas, where deprivation, isolation, and limited access to services drive health inequalities. We aim to: (1) improve access to evidence-based care and support, (2) strengthen service capacity for children with complex needs, and (3) expand meaningful involvement of CYP in research and service design.

Our research portfolio includes implementation and scale-up of evidence-based interventions such as PreCePT and PERIPrem (neonatal care), BRUSH (oral health), INTEGRATED (parenting support), and SOSA (child injury prevention). We lead cross-ARC collaborations through the NIHR ARC National Priority Programme for Children's Health and Maternity, developing prioritisation frameworks and implementation models for national adoption.

The team's expertise spans prevention science, epidemiology, public health, social determinants, and implementation. Partnerships with the NHS, local authorities, and third-sector organisations (e.g. Action for Children, Dartington Service Design Lab, Contact, Disabled Children's Partnership) ensure research is co-produced and directly informs policy and practice.

Current priorities include evaluating neurodiversity pathway models, strengthening mental health support through schools, and advancing inclusive participation by children and young people in research.

Methods for Research and Implementation

PenARC's Methods for Research and Implementation theme provides the methodological foundation for all ARC activity, ensuring our research is rigorous, inclusive, and ready for implementation. The theme brings together leading expertise in evidence synthesis, health economics, statistics, qualitative and realist methods, data science, epidemiology, and implementation science, underpinned by co-production, research inclusion, and knowledge mobilisation.

Our approach integrates methodological experts directly into research prioritisation, design, and delivery. This cross-cutting theme ensures that all projects embed research inclusion, evaluation, and implementation from the outset. Core methodological strengths include advanced trial and modelling design, economic evaluation at

individual and system levels, realist evaluation, and machine learning applications for service optimisation.

PenARC leads multiple NIHR-funded evidence synthesis centres (HSDR, PRP, and Isca Evidence), providing rapid policy-relevant evidence for DHSC, NHS England, and regional partners. Our Health Service Modelling Associates (HSMA) programme - developed with Health Innovation South West - builds capacity by seconding health and care staff to apply data science to real-world service challenges.

The theme also drives methodological innovation in research inclusion, AI applications, and hybrid implementation trial designs, with dedicated PhDs and fellowships in these areas. Collaboration with the Exeter BRC, HRC, SPCR, and regional data partners (including the NHS South West Secure Data Environment) enables data-driven and equitable research.

Mental Health: Turning Research into Real-World Impact

PenARC's Mental Health Theme addresses the urgent national need for equitable, person-centred mental health care, with a particular focus on underserved rural and coastal communities. It aims to improve access, integration, and quality of support across the life course - spanning perinatal, child, and adult services - and to strengthen links between mental and physical health.

Amid a growing UK-wide mental health crisis, the theme develops and implements evidence-based solutions that respond to local priorities while informing national learning and system improvement. Current work focuses on three interconnected areas: developing and testing digital and hybrid interventions to overcome barriers to access; evaluating integrated, community-based approaches that close gaps in provision across the lifespan; and address issues of workforce and quality of care so communities can better support those in greatest need.

With internationally recognised expertise in perinatal mental health, realist evaluation, mood disorders, policy translation, and community engagement, the team leads co-produced, multidisciplinary research that promotes inclusion and equity.

PenARC collaborates closely with VCSE organisations, NHS provider collaboratives, and Integrated Care Boards, aligning priorities with the Peninsula Research & Innovation Partnership, the NIHR Mental Health Mission, NIHR Mental Health Research Group (Plymouth) and NIHR Women's Health Collaborative Advisory Group. Through these regional and national partnerships, the theme seeks to generate generalisable learning that reduces inequalities, strengthens system capability, and improves mental health and wellbeing outcomes for diverse communities.

Prevention

PenARC's Prevention theme focuses on reducing the burden of preventable disease and tackling the structural causes of health inequalities across the South West. Working in close partnership with local authorities, ICBs, and the voluntary sector, the theme develops, evaluates, and implements preventive interventions that reflect local context while generating evidence with national relevance.

Our approach recognises that prevention must be both cross-cutting and equitable, addressing multiple determinants of health across physical, mental, and social domains. Projects are co-designed with communities and partners to ensure that interventions are inclusive, locally meaningful, and scalable. Core priorities include obesity, diabetes, cardiovascular risk, mental health, violence prevention, and social prescribing, alongside wider determinants such as poverty, education, and housing.

The team brings together leading expertise in clinical and social epidemiology, public health and primary care, prevention science, and behaviour change and violence reduction. This combination of methodological and applied strengths enables work spanning individual, community, and system levels.

Partnerships with HDRCs, the NIHR School for Public Health Research, and the Public Health Intervention Responsive Studies Team allow PenARC to integrate local insights with national policy priorities. Current projects include community-led poverty reduction initiatives, data-enabled trials of violence prevention, and evaluation of green and social prescribing.

The theme serves as a catalyst for prevention-oriented research across all ARC themes, embedding inclusion, co-production, and implementation science to deliver interventions that improve health outcomes and reduce inequalities locally and nationally.